



Data Release Application

Limited and Identifiable Extracts

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Client Application Revision History

The following reflects the history of changes made to this document during the application process prior to project production. Once in production, any further changes to the application may result in additional cost and production delays.

To be completed by CIVHC staff			
Date	New Version Number	Description of Change(s)	CIVHC Change Author (full name, complete title)
10/18/2024	V.01	Initial version drafted with client.	Lucía Sanders, Key Account Manager
10/31/2024	V.02	Removed provider filter criteria, removed request for member DOB, updated IRB details.	Lucía Sanders, Key Account Manager
1/23/2025	V.03	Added data flow diagram to methodology. Added finder file and expanded on linkage section.	Lucía Sanders, Key Account Manager
	V.04		
	V.05		
	V.06		
	V.07		
	V.08		
	V.09		
	V.10		

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Data Requestor Details

General Project Details

Project Title:	Suicidal Behavior among Deaf and Hard of Hearing Youths and Youths Experiencing Homelessness in the US during the COVID-19 Pandemic
Application Start Date:	10/17/2024
Requested Project Delivery Date:	2/1/2025
Client Organization (legal name):	The Lundquist Institute for Biomedical Innovation
Client Organization Address:	1124 W. Carson St, Torrance, CA 90502
To be completed by CIVHC staff	
CIVHC Contact (full name, complete title):	Lucía Sanders, Key Account Manager
Project Number:	25.01
Condensed Project Title:	Suicidal Behavior COVID

Project Contacts

Project Contact Name:	Frank Wu
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Invoice Contact Name:	Rie Sakai-Bizmark
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Data Release Fee Signatory:	Rie Sakai-Bizmark
Title:	Associate professor
Email:	rsakaibizmark@lundquist.org
Phone Number:	310-222-3699
Data Use Agreement Signatory:	Rie Sakai-Bizmark
Title:	Associate professor
Email:	rsakaibizmark@lundquist.org
Phone Number:	310-222-3699

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Project Schedule and Purpose

Proposed Project Start Date ¹ :	2/1/2025
Anticipated Project End Date:	7/1/2027
Proposed Publication or Release Date:	9/1/2027

1. Detail the specific research question(s) you are trying to answer or problem(s) you are trying to solve with this data request. Please list and number the individual questions.

Individual research questions:

- i. Are there differences in annual, monthly, and day-of-week rates of suicidal behavior among adolescents experiencing homelessness (AEH) during the COVID-19 pandemic compared to non-pandemic years and are there differences in the rates between AEH and domiciled adolescents?
- ii. Did rates of suicidal behavior increase among AEH during spring 2020, coinciding with school closures?
- iii. Are there differences in annual, monthly, and day-of-week rates of suicidal behavior among Deaf and hard of hearing (DHH) adolescents during the COVID-19 pandemic compared to non-pandemic years and are there differences in the rates between DHH and non-DHH adolescents?
- iv. Did rate of suicidal behavior among deaf and hard of hearing (DHH) adolescents increase in spring 2020?
- v. Exploratory: Are there any other health conditions for which the monthly trend changed in 2020, especially during the April 2020 school closures due to the pandemic?
- vi. Placebo analyses: Are the trends due to appendicitis changed in 2020?
- vii. Placebo analyses: Are there differences in the seasonal trends due to suicidal behavior among vulnerable adults aged 40-59 in 2020?

¹ After all required documents have been signed, typical production time is 30-60 days for a Limited or Identifiable Extract. Anticipate a longer production period for projects including a Finder File or creation of a Member Match File.

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2. Describe your methodology or how you will be using data from the Colorado All Payer Claims Database (CO APCD) to answer your research questions.

CO APCD data will be linked with HMIS (Colorado's Homeless Management Information System), hospital records (Colorado Hospital Association), and death records. HMIS data will only be used for AEH analysis. Database between 2016 and 2023 will be used.

Using CO APCD, hospitalization, and death records, we will identify youth aged 11 to 22 who utilized healthcare due to a suicide attempt or died by suicide between January 2017 and December 2022. To identify AEH, we will examine HMIS records for every youth who utilized care for a suicide attempt or died due to suicide, covering the period one year before and after the suicide attempt or one year before suicide death. To identify DHH, we will examine CO APCD records for every youth who utilized care for a suicide attempt or died due to suicide, covering the period one year before and after the suicide attempt or one year before suicide death. Thus, this longitudinal study will span January 2016 through December 2023.

We will identify D/HH youth using ICD-10-CM codes (H90, H91, and Q16). Youth with these codes in their CO APCD records anytime from one year before to one year after the suicide attempt or one year before the suicide death will be classified as D/HH.

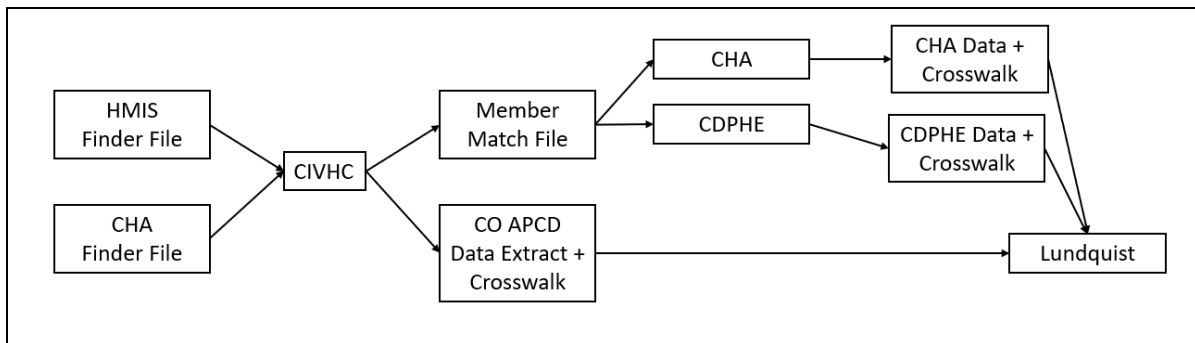
Exploratory Analysis: We will also explore if there are any other health conditions that changed the seasonal trend in 2020, compared to pre-pandemic period, especially during the April 2020 school closures due to the pandemic. ICD codes on CO APCD claims records will be used to determine health conditions.

Placebo analyses: First, to ensure the results are specific to vulnerable youth populations (AEH and DHH youth), we will analyze the data among persons aged 40-59 years with either a record of homelessness in the HMIS data or diagnosis of hearing loss in the CO APCD data. This age group was chosen due to their lower likelihood of being enrolled in school, making them less affected by school closures. Second, to ensure the results are specific to suicidal behavior, we will analyze the monthly trend in hospitalizations due to appendicitis among vulnerable youths, which is unlikely to be affected by school closures. Demonstrating a significant increase in suicidal behavior among vulnerable youths in spring 2020, without a corresponding rise in adults aged 40-49 years or in hospitalization due to appendicitis among vulnerable youths will provide strong evidence of an association between school closures and suicidal behavior among vulnerable youths.

Data Flow Diagram:

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3. Explain how this project will benefit Colorado and its residents.²

The project will directly benefit the vulnerable youths in Colorado by determining the seasonality of suicidal behavior and provide evidence to develop a targeted prevention/support measure for them. This project will also highlight the need for preparedness of potential future health crises.

4. Describe how your project will improve health care quality, increase health care value, or improve health outcomes for Colorado residents.²

The proposed research will inform whether suicide prevention measures tailored to AEH or DHH youths are needed during school break to prevent increased rates of suicides.

We will also identify health conditions that could be affected by the school calendar, including school closures due to the pandemic. Identifying health conditions affected by the school calendar and closures due to the pandemic can improve healthcare quality by enabling targeted interventions and better resource allocation. This approach can increase healthcare value through cost-effective care and data-driven decision-making, ultimately leading to improved health outcomes for residents by addressing disparities and enhancing mental health support during critical periods.

5. Health equity is defined as the state in which everyone has a fair and just opportunity to attain their highest level of health. Explain how your project addresses health equity.

Health issues among vulnerable youths have been vastly understudied leading to providing inadequate health services. The project addresses this health equity issue among vulnerable

² It is a statutory requirement for all non-public releases of CO APCD data to benefit Colorado or its residents. Contributions to generalizable knowledge alone are not sufficient to satisfy this requirement.

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youths by determining if vulnerable youths are in need of tailored suicide prevention measures that are unique to their circumstances.

6. Describe any publication you plan to develop based on your use of CO APCD data, its intended audience, and whether it will be made publicly available.

We will use CO APCD data to identify the changes in seasonality of health conditions, focusing on suicidal behaviors, during the pandemic. Our intention is to publish the results in a peer-reviewed journal accessible to the public.

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Data Matching and Linkage

Finder File

A Finder File is a file you submit to CIVHC with information about a pre-selected cohort for matching to CO APCD data. Ask your CIVHC Contact for more information about this process and requirements for Finder File submission.

Will you provide CIVHC with a Finder File as part of this project?

- ☐ No
☒ Yes

Member Match File

A Member Match File is a file that CIVHC creates on your behalf to send to a registry or other outside entity to create a crosswalk connecting data from the CO APCD to the other entity's data.

Does this project require the creation of a Member Match File?

- ☐ No
☒ Yes. Consult with your CIVHC Contact about completing a separate Data Element Selection Form specifying the data elements that should be used to create the Member Match File.

Answer the following:

Who will receive the Member Match File?
Vital Statistics (CDPHE), Colorado Hospital Association

Control Group

A Control Group is a group of individuals who can be used to compare against the cohort identified in the Finder File.

Will you need to create a Control Group as part of this project?

- ☒ No
☐ Yes. Consult with your CIVHC Contact about completing a separate Control Group Data Element Selection Form specifying the data elements that should be used to define the Control Group.

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Linkage

Data Linkage is a method of joining data from different sources together to create a new data set.

Will the CO APCD data be linked to another data source?

- ☐ No
- ☒ Yes. Answer the following:

What is/are the other data source/s?
HMIS, Vital Statistics, Colorado Hospital Association
Who will perform the data linkage?
Lundquist team
What identifying data elements will be used to perform the data linkage?
First name, last name, date of birth, race/ethnicity, SSN
What non-CO APCD data elements will appear in the new linked file?
HMIS: Homeless indicator, shelter/project start and end dates Hospital Records: Inpatient hospitalization, ED visits, dates of service Death records: Date of death, cause of death (suicide), race/ethnicity

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Data Inclusion Criteria

Make selections in the following sections based on what data you want to have included in this extract. If you will be creating a Control Group, complete this section for your study population and not the Control Group.

Protected Health Information (PHI)

Indicate which [Protected Health Information](#) data elements you require for your project purpose:

Available for Limited and Identifiable extracts:		
<input checked="" type="checkbox"/> Member 5-Digit Zip Code	<input type="checkbox"/> Member County	<input type="checkbox"/> Member City
<input checked="" type="checkbox"/> Member Dates of Service	<input type="checkbox"/> Member Eligibility Dates	<input type="checkbox"/> Employer Name
<input type="checkbox"/> Member Census Tract	<input type="checkbox"/> Member Census Block	<input type="checkbox"/> Member Census Block Group
Available for Identifiable extracts only (see also Identifiable Data Use Approval):		
<input type="checkbox"/> Member Name	<input type="checkbox"/> Member Date of Birth (if requesting more than year only)	
<input type="checkbox"/> Member Street Address	<input type="checkbox"/> Member Latitude and Longitude	
<input type="checkbox"/> Employer Tax ID		
Provide detailed justification for the inclusion of all PHI data selected above, and explain how its inclusion meets the Minimum Necessary Requirement . ³		
Dates of service are required to determine month and day of week trends in suicidal behavior. Zip code will be used to perform stratified analysis if numbers are high enough.		

³ Limited and Identifiable extracts must adhere to the [Minimum Necessary Requirement](#) under the [HIPAA Privacy Rule](#); only that data required to answer the project purpose can be included in the request.

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Line(s) of Business

- ☒ Commercial Payers
- ☒ Health First Colorado (Colorado's Medicaid and CHP+ programs)⁴
- ☐ Medicare Advantage
- ☐ Medicare Fee for Service (FFS)⁵

Year(s) of Data

- | | | | | | |
|--|--|--|--|--|---|
| <input type="checkbox"/> 2012 | <input type="checkbox"/> 2013 | <input type="checkbox"/> 2014 | <input type="checkbox"/> 2015 | <input checked="" type="checkbox"/> 2016 | <input checked="" type="checkbox"/> 2017 |
| <input checked="" type="checkbox"/> 2018 | <input checked="" type="checkbox"/> 2019 | <input checked="" type="checkbox"/> 2020 | <input checked="" type="checkbox"/> 2021 | <input checked="" type="checkbox"/> 2022 | <input checked="" type="checkbox"/> 2023 ⁶ |

Claim Type(s)

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Inpatient Facility | <input checked="" type="checkbox"/> Outpatient Facility | <input checked="" type="checkbox"/> Professional |
| <input checked="" type="checkbox"/> Pharmacy | <input type="checkbox"/> Dental | |

Financial Detail by Line Item

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Charged Amount | <input checked="" type="checkbox"/> Allowed Amount | <input type="checkbox"/> Plan Paid Amount |
| <input type="checkbox"/> Plan Pre-Paid Amount | <input type="checkbox"/> Member Copay | <input type="checkbox"/> Member Deductible |
| <input type="checkbox"/> Member Coinsurance | <input type="checkbox"/> Total Member Liability | |

⁴ Medicaid-only data requests must be approved by the Colorado Department of Health Care Policy and Financing.

⁵ Medicare FFS data are not available for all requests and must go through a separate approval process.

⁶ This year's data is not fully adjudicated.

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Filter Criteria – Services, Providers, Facilities

If you need data for specific services, providers and/or facilities, specify that filter criteria below (ask your CIVHC Contact about including an additional file with this application for large code lists):

ICD Diagnosis Code(s):
Procedure(s) (list CPT, HCPCS, DRG, ICD, and/or CDT codes):
Drug(s) (list pharmacy NDC and/or HCPCS codes):
Facility Type(s):
Facilities (list NPIs and/or Pharmacy IDs):
Facilities within these geographical areas (list county, zip code, Census Tract , etc.):
Provider Type(s):
Provider(s) (list NPIs):
Providers within these geographical areas (list county, zip code, Census Tract , etc.):
Specific payers (minimum of five):

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Other claim specification:

Filter Criteria – Members/Patients

If you need data for specific member/patient groups, specify that filter criteria below (ask your CIVHC Contact about including an additional file with this application for large code lists):

Ages:		
10-24 years old and 40-59 years old (In addition to matched finder file patients)		
<input checked="" type="checkbox"/> At the time of service	<input type="checkbox"/> At year end	<input type="checkbox"/> By another anchor date: <i>Specify here</i>
With these ICD Diagnosis Code(s):		
Who have had the following procedure(s) (list CPT, HCPCS, DRG, ICD, and/or CDT codes):		
Within these geographical areas (list county, zip code, Census Tract , etc.):		

Value-Add Data Elements

- ☐ [Medicare Severity Diagnosis Related Group](#) Codes (MS-DRGs)
- ☐ [3M All Patient Refined Diagnosis Related Group](#) Codes (3M APR DRGs)
- ☐ [Medicare Repricer](#) (available at the claim line level)
- ☐ Fields from the [American Community Survey](#) (available at the Census Tract level):

Specify here

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Additional Documentation

Data Element Selection Form (DESF)

The Data Release Application must be accompanied by a completed Data Element Selection Form. Ask your CIVHC Contact for more information about completing this form.

- ☒ By checking this box, the Client Organization confirms that the Data Element Selection Form has been completed.
- ☒ If applicable, by checking this box the Client Organization confirms that a separate Member Match File Data Element Selection Form has been completed.
- ☐ If applicable, by checking this box the Client Organization confirms that a separate Control Group Data Element Selection Form has been completed.

Identifiable Data Use Approval

If you are requesting [Identifiable](#) information, approval from an [Institutional Review Board \(IRB\)](#) or a [Privacy Board](#) is required before such data can be released.

- ☐ Not applicable; the Client Organization is requesting a Limited Extract.

Approval Type

- ☒ IRB Approval
- ☐ Privacy Board Approval

Approval Type

- ☐ Approval request not yet submitted.
Anticipated submission date:
- ☐ Approval request submitted and under review.
Anticipated project approval date:
- ☒ Approval already received.

Approval Documentation

- ☐ By checking this box, the Client Organization confirms that the IRB or Privacy Board **application and approval documents** have been provided to CIVHC.

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Data Management Plan

An organization requesting CO APCD data must submit an organizational Data Management Plan to CIVHC outlining the organization's data security and data management policies and procedures to safeguard the data. This Data Management Plan must be approved by CIVHC prior to any data release.

Date Submitted to CIVHC:	10/29/2024
Date Approved by CIVHC:	11/8/2024

Client Acknowledgements and Signatures

Change Agent Index

CIVHC can publicly share the Client Organization's name in its [Change Agent Index](#)?

- ☒ Yes
☐ No

Report or Product Distribution

If your project results in the production of a report for public distribution in any format (print, electronic, lecture, slides, etc.), including peer-reviewed publication, it must be submitted to CIVHC for review prior to public release. CIVHC will assess compliance with [CMS Cell Size Suppression Policy](#), risk of inferential identification, CIVHC and CO APCD citations, and consistency with the purpose and methodology described in this Data Release Application. CIVHC will not assess the accuracy of the study results or attempt to recreate results.

This requirement is further defined in the Data Use Agreement. Failure to pursue and obtain CIVHC approval prior to publication will be a violation of the Data Use Agreement and may put the organization's future access to data from the CO APCD at risk.

- ☒ By checking this box, the Client Organization acknowledges this requirement.

Data Destruction Period

All data must be destroyed within 30 days of the project end date. If your project end date changes from this application, please reach out to your CIVHC Contact for a project extension request form.

- ☒ By checking this box, the Client Organization acknowledges that CIVHC's [Data Destruction Certificate](#)⁷ must be completed and returned to DataCompliance@CIVHC.org by 7/31/2027 based on the [Anticipated Project End Date](#).

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Data Users

List any individuals that will be working with the data. The Data Use Agreement must be updated through your CIVHC Contact every time individuals are granted access to the data during the course of the project.

Full Name	Title/Role	Organization
Rie Sakai-Bizmark	Associate Professor	Lundquist
Frank Wu	Research Associate	Lundquist
Dennys Estevez	Biostatistician	Lundquist
Emily Marr	Assistant Researcher	Lundquist

⁷ Available on the [Data Release Application and Documents](#) page of CIVHC's website under *Privacy, Security, and Regulatory Information*.

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Data Release Application Version Approvals

The Client Organization has reviewed and confirms that the final version number of the Data Release Application reflected below correctly represents the project objectives.

Version	Checkpoint
V.02	Presented at CIVHC Application Review
V.03	Presented to the Data Release Review Committee (DRRC)
V.00	Final version approved for production

CIVHC Sign-Off		Receiving Organization Sign-Off	
Signature:		Signature:	
Name:	Lucía Sanders	Name:	Frank Wu
Title:	Key Account Manager	Title:	Research Associate
Date:		Date:	

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Data Element Selection Form Version Approvals

The Client Organization has reviewed and confirms that the final version number of the Data Element Selection Form reflected below correctly represents the data specifications needed to meet the project objectives.

Version	Checkpoint
V.02	Presented at CIVHC Application Review
V.03	Presented to the Data Release Review Committee (DRRC)
V.00	Final version approved for production

CIVHC Sign-Off		Receiving Organization Sign-Off	
Signature:		Signature:	
Name:	Lucía Sanders	Name:	Frank Wu
Title:	Key Account Manager	Title:	Research Associate
Date:		Date:	